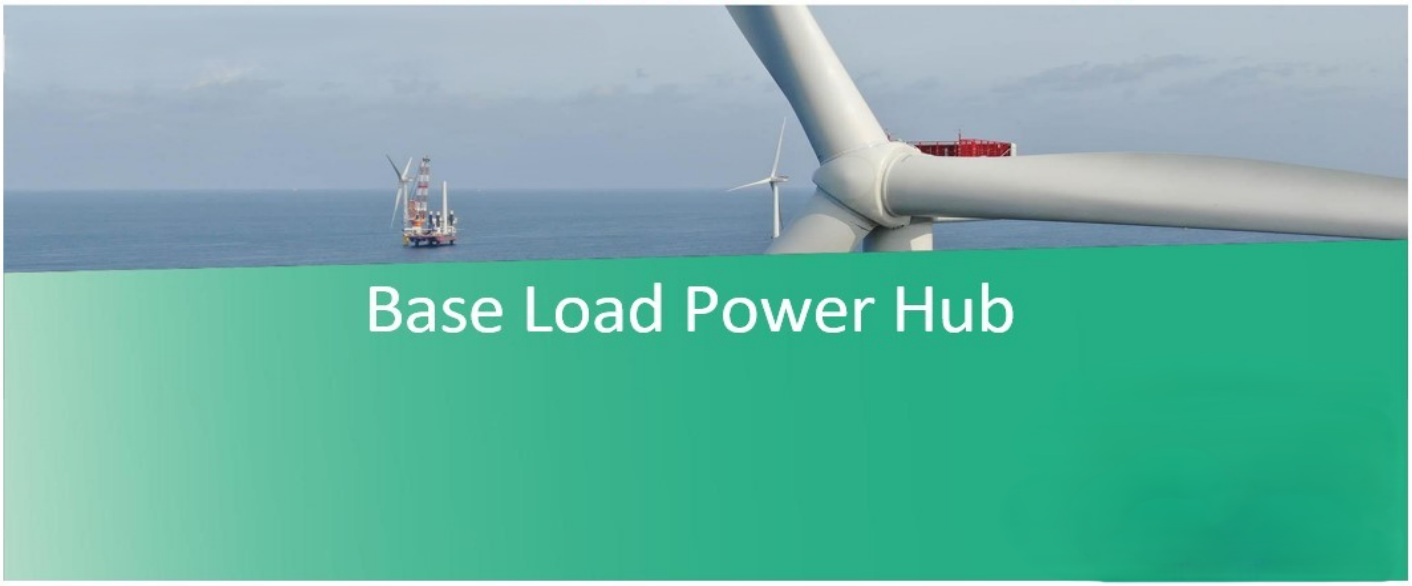
CROSSWIND

ROSETTI MARINO

PROVERLIS

PROJECT **123A90 - HOLLANDSE KUST NOORD WIND PARK**
BLPH Project



MECHANICAL COMPLETION DOSSIER (ONSHORE)

SYSTEM

70
Safety and Facility Systems

SUBSYSTEM

70-00-02

Junction Box 950-JE-01102 and Multi-core cable (FGS System)

CROSSWIND	123A90 - HOLLANDSE KUST NOORD WIND PARK BLPH Project MECHANICAL COMPLETION DOSSIER INDEX	ROSETTI MARINO

Sub System N°:	70-00-02	Tick as appropriate	ONSHORE	O
Description:	Junction Box 950-JE-01102 and Multi-core cable (FGS System)		OFFSHORE	NA

1.	***READY FOR COMMISSIONING CERTIFICATE*** *Ready For Commissioning Certificate (RFC)*	O
2.	***CONSOLIDATED PUNCH LISTS*** *Cleared and Residual Items*	O
3.	***SYSTEM/SUB-SYSTEM LIMIT DRAWINGS*** *Mark-up drawings showing the limits of the relevant System/Sub-System*	NA
4.	***MECHANICAL COMPLETION STATUS INDEX – BUILDING DISCIPLINE*** *Building Sub-System Status Index (Print out) and Check/Test sheets*	NA
5.	***MECHANICAL COMPLETION STATUS INDEX – ELECTRICAL DISCIPLINE*** *Electrical Sub-System Status Index (Print out) and Check/Test Sheets* *Hazardous Area Equipment Detailed Inspection*	NA
6.	***MECHANICAL COMPLETION STATUS INDEX - INSTRUMENTAL DISCIPLINE*** *Instrumental Sub-System Status Index (Print out) and Check/Test Sheets*	O
7.	***MECHANICAL COMPLETION STATUS INDEX - MECHANICAL DISCIPLINE*** *Mechanical SubSystem Status Index (Print out) and Check/Test Sheets*	NA
8.	***MECHANICAL COMPLETION STATUS INDEX - TELECOMMUNICATION DISCIPLINE*** *Telecommunication Sub-System Status Index (Print out) and Check/Test Sheets*	NA
9.	***MECHANICAL COMPLETION STATUS INDEX - HVAC DISCIPLINE*** *HVAC Sub-System Status Index (Print out) and Check/Test Sheets*	NA
10.	***MECHANICAL COMPLETION STATUS INDEX - PIPING DISCIPLINE*** *Piping Sub-System Status Index and Check/Test Sheets*	NA
11.	***MECHANICAL COMPLETION INDEX - SAFETY DISCIPLINE*** *Safety Sub-System Status Index (Print out) and Check/Test Sheets*	NA
12.	***FAT / VENDOR REPORTS*** *Fat reports issued by vendors and/or vendor reports*	NA
13.	***MECHANICAL COMPLETION CHANGES / MARK-UPS*** *A copy of the changes initiated during the Mechanical Completion process pertaining to the relevant Sub-System will be incorporated in this section*	NA

Note: Under the generic terminology “Building” are also covered the following disciplines: **Structural, Painting**

Under the generic terminology “Instrumental” is also covered the following discipline: **Fire & Gas**

ROSETTI MARINO

123A90 - HOLLANDSE KUST NOORD WIND PARK
BLPH Project

CROSSWIND

Ready For Commissioning (RFC) Certificate

COMPLETE	●	PARTIAL	

Revision:	1		Issued on:	2024-12-07	
System:	70	/	Safety and Facility Systems		
SubSystem:	70-00-02	/	Junction Box 950-JE-01102 and Multi-core cable (FGS System)		

1	COMPANY has, at its option and if required, reviewed the mechanical completion associated with the above-named system/sub-system of the SCOPE and observed that such functional sub-system has been brought into readiness for commencement of the associated pre-commissioning and commissioning activities, but for the outstanding punch list items, if any, attached and referred in this Certificate.
2	Issuance of this Certificate shall not release CONTRACTOR from any of his obligations, responsibilities or liabilities under the CONTRACT.
3	Mechanical Completion Status Index attached (per Discipline) Punch List report attached (Outstanding and Cleared)

PUNCH LIST	PENDING POINTS	
Note: All Category "A" Items must be cleared prior to issue a Ready For Commissioning (RFC) Certificate	A '0	B 3

REMARKS:

	CONTRACTOR Construction Manager	**CONTRACTOR** Commissioning Manager	**COMPANY** Construction Lead (if required)	**COMPANY** Commissioning Lead (if required)
Name	Wolmer Borghi	Kristian Castellani	CPY NOT PRESENT	CPY NOT PRESENT
Date	2024-12-10	2024-12-10	2024-12-10	2024-12-10
Signature	PROVERLIS Digitaly signed by Wolmer Borghi 2024-12-10T12:04:55.550Z	PROVERLIS Digitaly signed by Kristian Castellani 2024-12-10T08:16:27.681Z	PROVERLIS Digitaly signed by CPY NOT PRESEN 2024-12-10T12:09:36.016Z	PROVERLIS Digitaly signed by CPY NOT PRESEN 2024-12-10T12:09:55.471Z

CROSSWIND

ROSETTI MARINO

Project CROSSWIND

STATUS INDEX DETAIL

Filtered on subsystem: 70-00-02 & process: MC

Electrical	70-00-02 Junction Box 950-JE-01102 and Multi-core cable (FGS System)						
ITEM		TASK					
Code	Description	Location	Code	Form	Progress	Date	Certificate
950-JE-01102	AI JB TO FGS	ONSHORE	C10002145	CPX31	100	2024-12-02	RFC 1

Project CROSSWIND

STATUS INDEX DETAIL

Filtered on subsystem: 70-00-02 & process: MC

Instrumental	70-00-02 Junction Box 950-JE-01102 and Multi-core cable (FGS System)						
ITEM		TASK					
Code	Description	Location	Code	Form	Progress	Date	Certificate
950-JE-01102/B400-FGS-003	AI JB TO FGS / MARSHALLING PCS	ONSHORE	C10002146	CJX10	100	2024-12-02	RFC 1

CROSSWIND

ROSETTI MARINO

Project CROSSWIND

PUNCH LIST REPORT

SYSTEM 70 Safety and Facility Systems

SUBSYSTEM 70-00-02 Junction Box 950-JE-01102 and Multi-core cable (FGS System)

Instrumental

CODE	CAT	ITEM	DEFECT DESCRIPTION	CORRECTIVE ACTION	PERFORMED ACTION	ISSUED	CARRIED	CHECKED	APPROVED
C30001130	A	950-JE-01102/B400-FGS-003 C10002146	Missing the entry thread seal, between the cable gland and the adaptor (950-JE-01102). See attached photo.	.		Gtangianu 2024-12-02	2024-12-07	Ecarotenuto 2024-12-07	2024-12-07
C30001136	B	950-JE-01102/B400-FGS-003 C10002146	Identification tag wires missing both side the 950-JE-01102/B400-FGS-003	.		Gtangianu 2024-12-02			
C30001137	B	950-JE-01102/B400-FGS-003 C10002146	Cable needs to be better dressed on the cabletray. See attached photo.	.		Gtangianu 2024-12-02	2024-12-05	LNovaga 2024-12-05	2024-12-05
C30001140	B	950-JE-01102/B400-FGS-003 C10002146	Missing cable tags on all internal and external routing (950-JE-01102/B400-FGS-003).	.		Gtangianu 2024-12-02			

CROSSWIND

ROSETTI MARINO

Project CROSSWIND

PUNCH LIST REPORT

SYSTEM	70	Safety and Facility Systems
SUBSYSTEM	70-00-02	Junction Box 950-JE-01102 and Multi-core cable (FGS System)

Electrical

CODE	CAT	ITEM	DEFECT DESCRIPTION	CORRECTIVE ACTION	PERFORMED ACTION	ISSUED	CARRIED	CHECKED	APPROVED
C30001132	B	950-JE-01102 C10002145	not installed certificate plug .See attached photo.	.		Gtangianu 2024-12-02			

Section 2 CONSOLIDATED PUNCH LISTS

CROSSWIND

ROSETTI MARINO

Project CROSSWIND

PUNCH LIST REPORT

SYSTEM 70 Safety and Facility Systems

SUBSYSTEM 70-00-02 Junction Box 950-JE-01102 and Multi-core cable (FGS System)

Instrumental

CODE	CAT	ITEM	DEFECT DESCRIPTION	CORRECTIVE ACTION	PERFORMED ACTION	ISSUED	CARRIED	CHECKED	APPROVED
C30001130	A	950-JE-01102/B400-FGS-003 C10002146	Missing the entry thread seal, between the cable gland and the adaptor (950-JE-01102). See attached photo.	.		Gtangianu 2024-12-02	2024-12-07	Ecarotenuto 2024-12-07	2024-12-07
C30001136	B	950-JE-01102/B400-FGS-003 C10002146	Identification tag wires missing both side the 950-JE-01102/B400-FGS-003	.		Gtangianu 2024-12-02	2025-03-04	JKrizanic 2025-03-04	2025-03-04
C30001137	B	950-JE-01102/B400-FGS-003 C10002146	Cable needs to be better dressed on the cabletray. See attached photo.	.		Gtangianu 2024-12-02	2024-12-05	LNovaga 2024-12-05	2024-12-05
C30001140	B	950-JE-01102/B400-FGS-003 C10002146	Missing cable tags on all internal and external routing (950-JE-01102/B400-FGS-003).	.		Gtangianu 2024-12-02	2025-02-04	Gtangianu 2025-02-04	2025-02-04

CROSSWIND

ROSETTI MARINO

Project CROSSWIND

PUNCH LIST REPORT

SYSTEM	70	Safety and Facility Systems
SUBSYSTEM	70-00-02	Junction Box 950-JE-01102 and Multi-core cable (FGS System)

Electrical

CODE	CAT	ITEM	DEFECT DESCRIPTION	CORRECTIVE ACTION	PERFORMED ACTION	ISSUED	CARRIED	CHECKED	APPROVED
C30001132	B	950-JE-01102 C10002145	not installed certificate plug .See attached photo.	.		Gtangianu 2024-12-02	2024-12-30	Gtangianu 2024-12-30	2024-12-30

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30001140

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10002146	1.4 Discipline	Instrumental
1.2 Item	950-JE-01102/B400-FGS-003	AI JB TO FGS / MARSHALLING PCS	
1.3 Subsystem	70-00-02	Junction Box 950-JE-01102 and Multi-core cable (FGS System)	

2 - OBSERVATION

Missing cable tags on all internal and external routing (950-JE-01102/B400-FGS-003).

Name: Giovanni Tangianu

Date: 2024-12-02

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Giovanni Tangianu
3.4 Activity code	MC Mechanical Completion	Date	2024-12-02
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

Installed.

Name: Giovanni Tangianu

Date: 2025-02-04

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30001130

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10002146	1.4 Discipline	Instrumental
1.2 Item	950-JE-01102/B400-FGS-003	AI JB TO FGS / MARSHALLING PCS	
1.3 Subsystem	70-00-02	Junction Box 950-JE-01102 and Multi-core cable (FGS System)	

2 - OBSERVATION

Missing the entry thread seal, between the cable gland and the adaptor (950-JE-01102). See attached photo.

Name: Giovanni Tangianu
Date: 2024-12-02
Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	A PL A	Name	Giovanni Tangianu
3.4 Activity code	MC Mechanical Completion	Date	2024-12-02
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:
Date:
Signature:

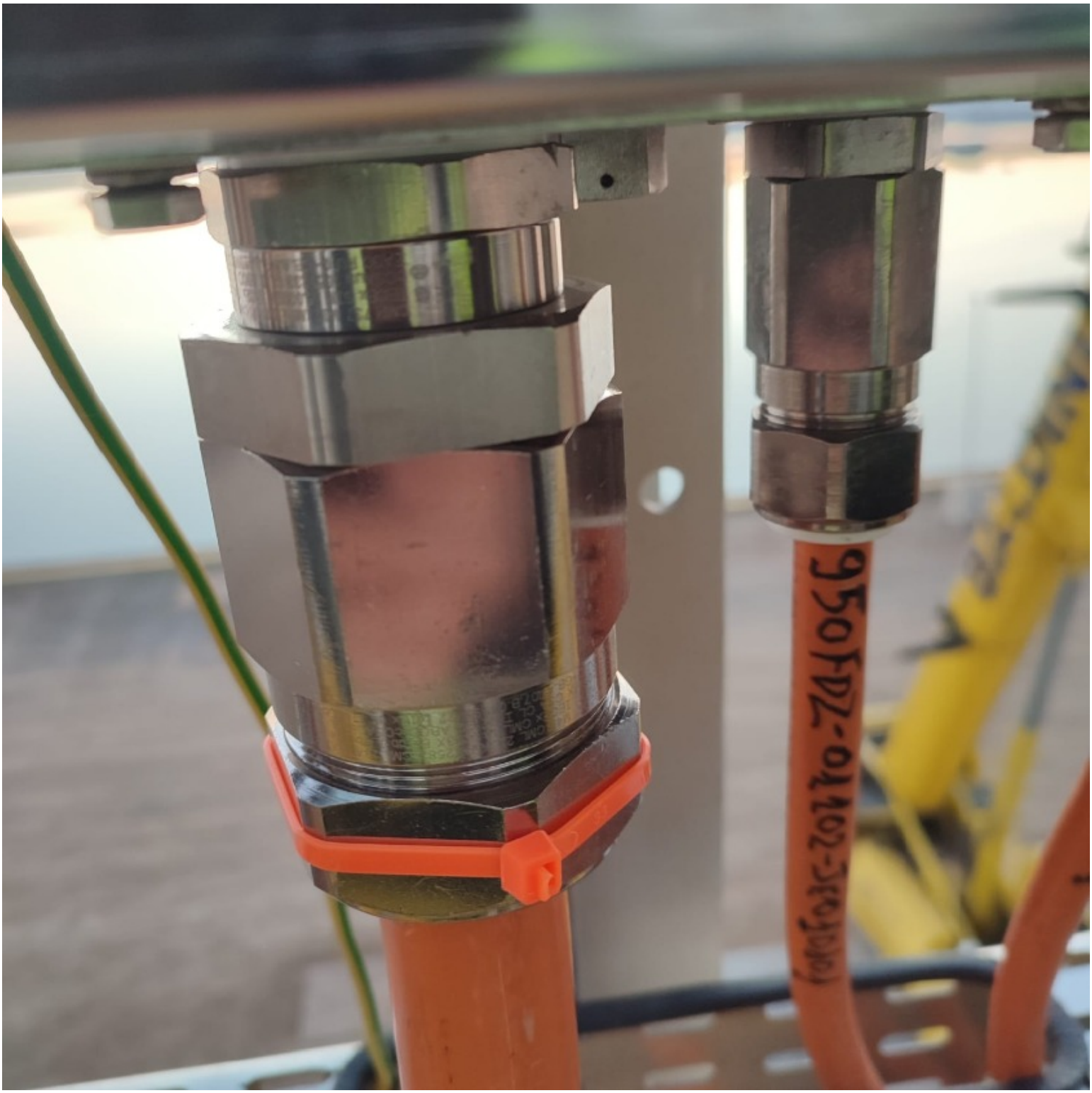
5 - CLEARANCE CHECK

done

Name: Eleonora Carotenuto
Date: 2024-12-07
Signature:

6- CLEARANCE APPROVAL

Name:
Date:
Signature:



ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30001132

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10002145	1.4 Discipline	Electrical
1.2 Item	950-JE-01102	AI JB TO FGS	
1.3 Subsystem	70-00-02	Junction Box 950-JE-01102 and Multi-core cable (FGS System)	

2 - OBSERVATION

not installed certificate plug .See attached photo.

Name: Giovanni Tangianu

Date: 2024-12-02

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Giovanni Tangianu
3.4 Activity code	MC Mechanical Completion	Date	2024-12-02
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

Installed.

Name: Giovanni Tangianu

Date: 2024-12-30

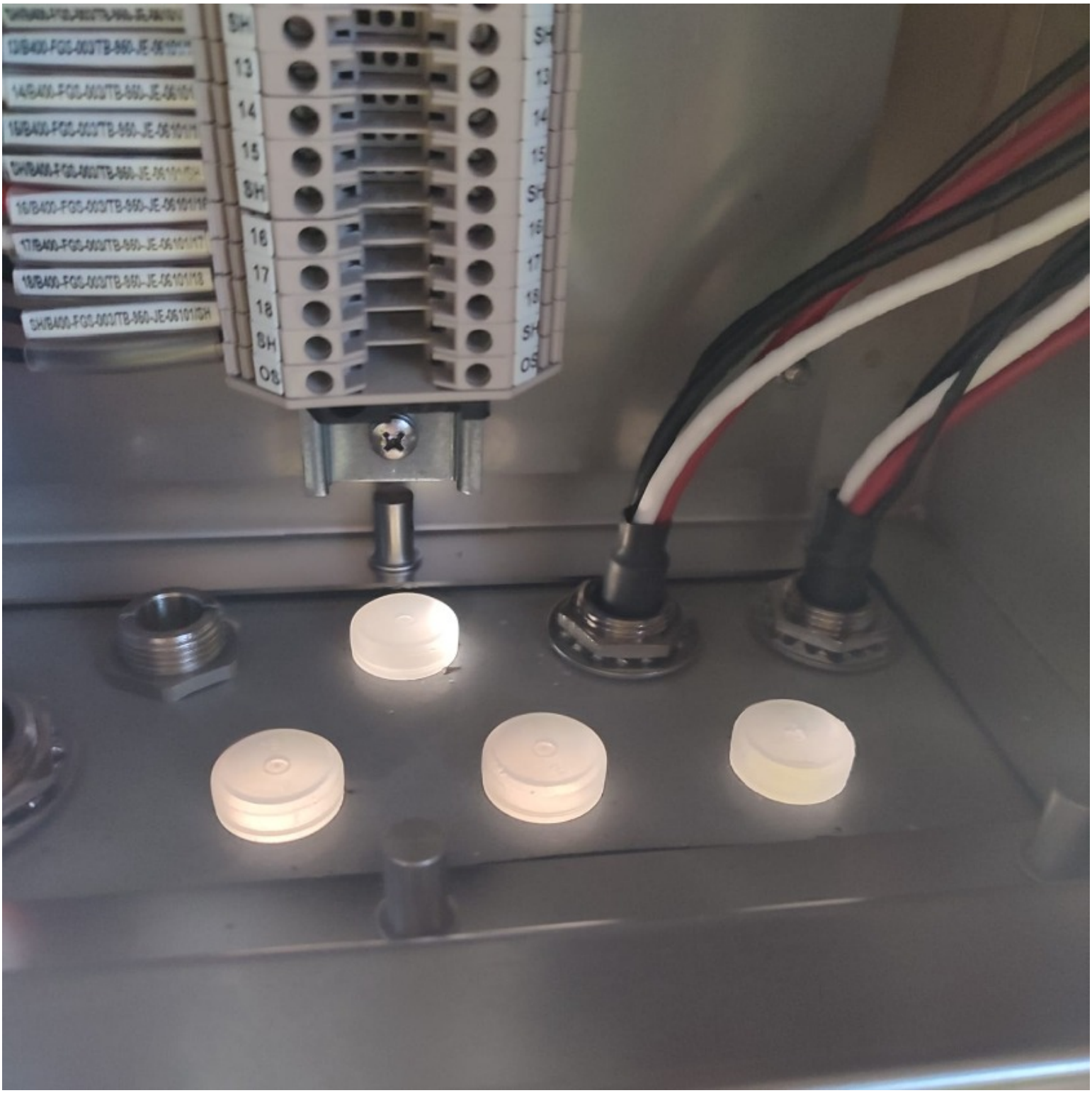
Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:


SH
13
14
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SH
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SH
OS

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30001136

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10002146	1.4 Discipline	Instrumental
1.2 Item	950-JE-01102/B400-FGS-003	AI JB TO FGS / MARSHALLING PCS	
1.3 Subsystem	70-00-02	Junction Box 950-JE-01102 and Multi-core cable (FGS System)	

2 - OBSERVATION

Identification tag wires missing both side the 950-JE-01102/B400-FGS-003

Name: Giovanni Tangianu

Date: 2024-12-02

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Giovanni Tangianu
3.4 Activity code	MC Mechanical Completion	Date	2024-12-02
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

DONE

Name: Josip Krizanic

Date: 2025-03-04

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30001137

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10002146	1.4 Discipline	Instrumental
1.2 Item	950-JE-01102/B400-FGS-003	AI JB TO FGS / MARSHALLING PCS	
1.3 Subsystem	70-00-02	Junction Box 950-JE-01102 and Multi-core cable (FGS System)	

2 - OBSERVATION

Cable needs to be better dressed on the cabletray. See attached photo.

Name: Giovanni Tangianu

Date: 2024-12-02

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Giovanni Tangianu
3.4 Activity code	MC Mechanical Completion	Date	2024-12-02
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

Done.

Name: Lorenzo Novaga

Date: 2024-12-05

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:



Section 3 SYSTEM,SUB-SYSTEM LIMIT DRAWINGS

NOT APPLICABLE

Section 4 MECHANICAL COMPLETION STATUS INDEX - BUILDING DISCIPLINE

NOT APPLICABLE

Section 5 MECHANICAL COMPLETION STATUS INDEX - ELECTRICAL DISCIPLINE

NOT APPLICABLE

Section 6 MECHANICAL COMPLETION STATUS INDEX - INSTRUMENTAL DISCIPLINE

CROSSWIND

ROSETTI MARINO

Project CROSSWIND

STATUS INDEX DETAIL

Filtered on subsystem: 70-00-02 & process: MC & discipline : I

Instrumental	70-00-02 Junction Box 950-JE-01102 and Multi-core cable (FGS System)						
ITEM		TASK					
Code	Description	Location	Code	Form	Progress	Date	Certificate
950-JE-01102	AI JB TO FGS	ONSHORE	C10002145	CJX31	100	2024-12-02	RFC 1
950-JE-01102/B400-FGS-003	AI JB TO FGS / MARSHALLING PCS	ONSHORE	C10002146	CJX10	100	2024-12-02	RFC 1

ROSETTI MARINO | PROVERLIS | CROSSWIND

ITEM	Tag	950-JE-01102	: AI JB TO FGS			Dwg	123A90-DDL-IN-DL-40081
	S/Sys	70-00-02	: Junction Box 950-JE-01102 and Multi-core cable (FGS System)			Module	UD
TASK	code	C10002145		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity CCK	Discipline	Instrumental Form CJX31		Junction and Marshalling Box

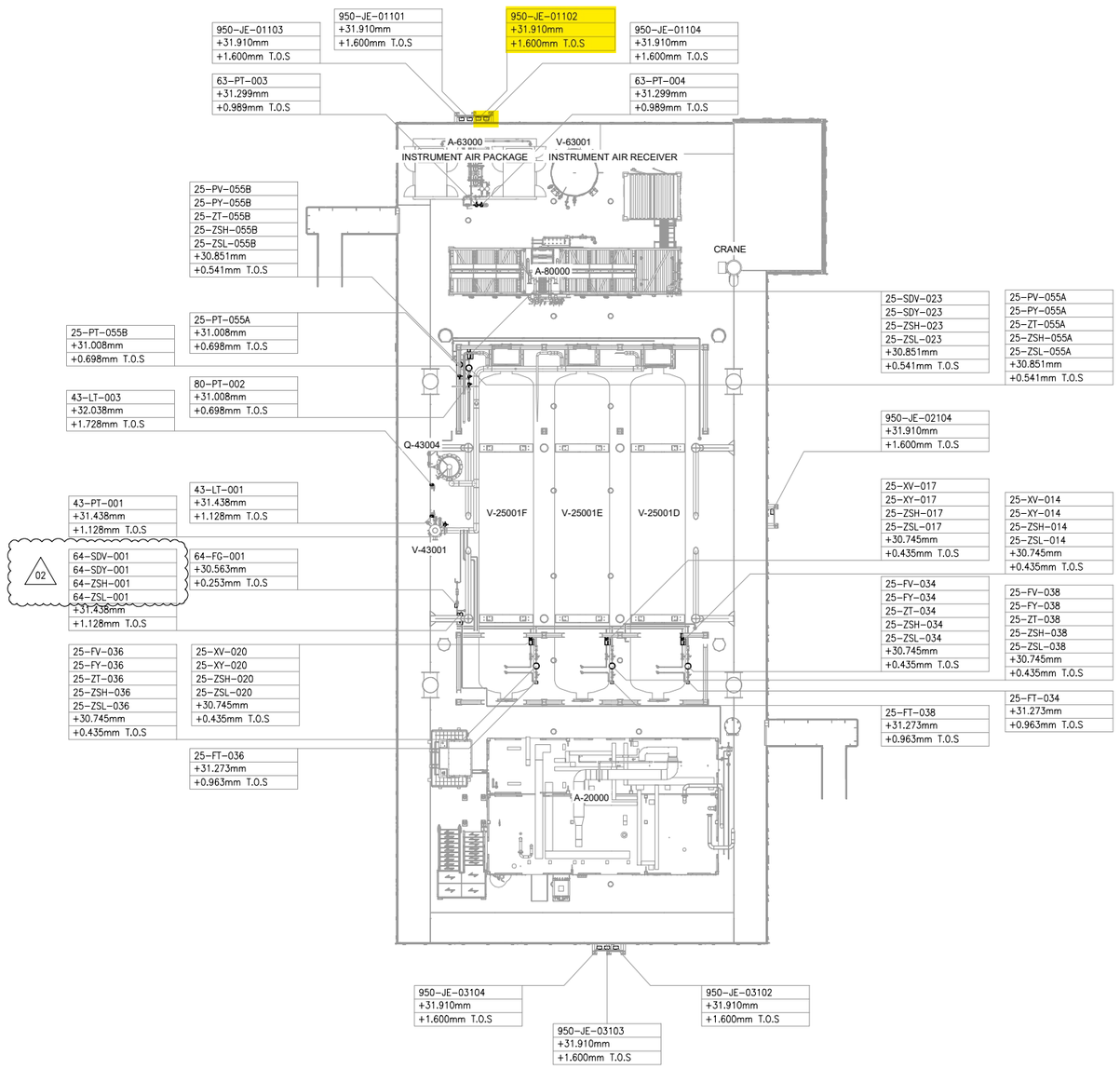
1	Check box is de-energized and safe.	OK
2	Check box is correctly mounted and easily accessible.	OK
3	Check box tagging against drawing.	OK
4	Check nameplate data is correct.	OK
5	Check flameproof joints are clean and greased with approved lubricants (if required).	NA
6	Check for damaging gaskets.	OK
7	Check all bolts are fitted and correcly tighted .	OK
8	Check all unused entries are suitably plugged.	PL
9	Check earthing and bonding against drawings.	OK
10	Check terminal blocks segregation barriers are fitted where necessary.	NA
11	If required produce Red Line Mark Up for "AS BUILT"	

Comments:

	Performed by	● WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	ICS IMPIANTI	RM(ROSETTI MARINO)	
Name	Francesco Zucca	Giovanni Tangianu	
Date	2024-12-02	2024-12-02	
Signature	PROVERLIS Digitaly signed by Francesco Zucca 2024-12-02T07:11:21.972Z	PROVERLIS Digitaly signed by Giovanni Tangianu 2024-12-02T17:18:47.884Z	

DRAWING NO. 123A90-DDL-IN-DL-40081

REV. 01

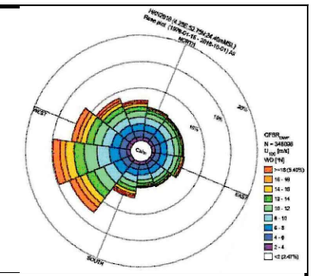


UPPER DECK

SCALE: 1:100

VIEW EL. 29310mm to 33740mm





NOTES

1. ALL DIMENSIONS AND ELEVATIONS ARE GIVEN IN mm UNLESS OTHERWISE NOTED.
2. ELEVATIONS REFER TO T.O.S.
3. THIS DRAWING IS VALID ONLY FOR INSTRUMENT LOCATION LAYOUT.

LEGEND

- INSTRUMENT JUNCTION BOX
- ELECTRONIC INSTRUMENT
- CONTROL / ON-OFF VALVE

HOLDS

REFERENCE DOCUMENTS

123A90-DDL-PP-DL-70070	PLOT PLAN - LOWER & UPPER DECK
123A90-DDL-IN-DL-40080	INSTRUMENT LAYOUT - LOWER DECK
123A90-DDL-IN-LIS-40091	INSTRUMENT CABLE LIST
123A90-DDL-IN-DG-40015	INSTRUMENT-CCS WIRING DIAGRAMS
123A90-DDL-IN-DG-40016	INSTRUMENT-SAFETY SYSTEM WIRING DIAGRAMS
123A90-DDL-IN-DL-40083	INSTRUMENT MAIN CABLES ROUTING-LOWER DECK

INSERT SUBCONTRACTOR / VENDOR LOGO HERE

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	04/10/24	VBA	LCA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	26/08/24	VBA	LCA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	22/12/23	VBA	LCA	DLO	ISSUE FOR REVIEW (IFR)

VALID FOR CONSTRUCTION

FDL DWG: **123A90-FDL-IN-DL-40081**

REV.:	DATE:	SIGNATURE:
2_A	07/10/24	G.Randi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

TITLE :
BASE LOAD POWER HUB (BLPH)
INSTRUMENT LOCATION LAYOUT–UPPER DECK
TOS EL. 30.310M

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:150
DRAWN VBA	CHECKED LCA	APPROVED DLO	DATE 04/10/24

A1	DRAWING NO. 123A90-DDL-IN-DL-40081	SHEET 001	REV. 02

File Name : 123A90-DDL-IN-DL-40081 REV01.dwg

DRAWING NO. 123-A90-DDL-IN-DG-40016

REV. 01

FIELD		MULTICABLE	I&T EQUIPMENT ROOM (ITER)
INSTRUMENTS	JUNCTION BOX	No.	MARSHALLING CABINET
	950-JE-01102		~~B400-FGS-002~~ B400-FGS-003

<01>

950-GDZ-01101 (PWR+, 4-20mA, PWR-) RD, WH, BK — NOTE-2

C-950-GDZ-01101/950-JE-01102
3x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS

950-GDZ-01102 (PWR+, 4-20mA, PWR-) RD, WH, BK — NOTE-2

C-950-GDZ-01102/950-JE-01102
3x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS

950-GDZ-01103 (PWR+, 4-20mA, PWR-) RD, WH, BK — NOTE-2

C-950-GDZ-01103/950-JE-01102
3x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS

TB-1

RD, WH, BK	1	
	2	
	3	
	SH	
RD, WH, BK	4	TR1
	5	
	6	
	SH	
RD, WH, BK	7	
	8	TR2
	9	
	SH	
SPARE	10	
	11	TR3
	12	
	SH	
SPARE	13	
	14	TR4
	15	
	SH	
SPARE	16	
	17	TR5
	18	
	SH	
	OS	TR6

950-JE-01102/B400-FGS-003
~~950-JE-01102/B400-FGS-002~~
6x3x2.5mm2,Sh+ShT+ARM,F.Res,ORANGE,NIS

TB-950-JE-01102

TR1	1	
Shield Bar	2	950-GDZ-01101
	3	
TR2	4	
Shield Bar	5	950-GDZ-01102
	6	
TR3	7	
Shield Bar	8	950-GDZ-01103
	9	
TR4	10	
Shield Bar	11	SPARE
	12	
TR5	13	
Shield Bar	14	SPARE
	15	
TR6	16	
	17	SPARE
	18	

Shield Bar — I.E.

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-IN-DG-40016**

REV.:	DATE:	SIGNATURE:
1_L	26/11/24	G.Randi

ROSETTI MARINO SpA

CROSSWIND | ROSETTI MARINO

TITLE :
BASE LOAD POWER HUB (BLPH)
INSTRUMENT–FGS WIRING DIAGRAMS
950–JE–01102

CONTRACT NO./TITLE			SCALE N/A
DRAWN VBA	CHECKED LCA	APPROVED DLO	DATE 23/02/2024

A3	DRAWING NO. 123A90–DDL–IN–DG–40016	SHEET 031	REV. 01

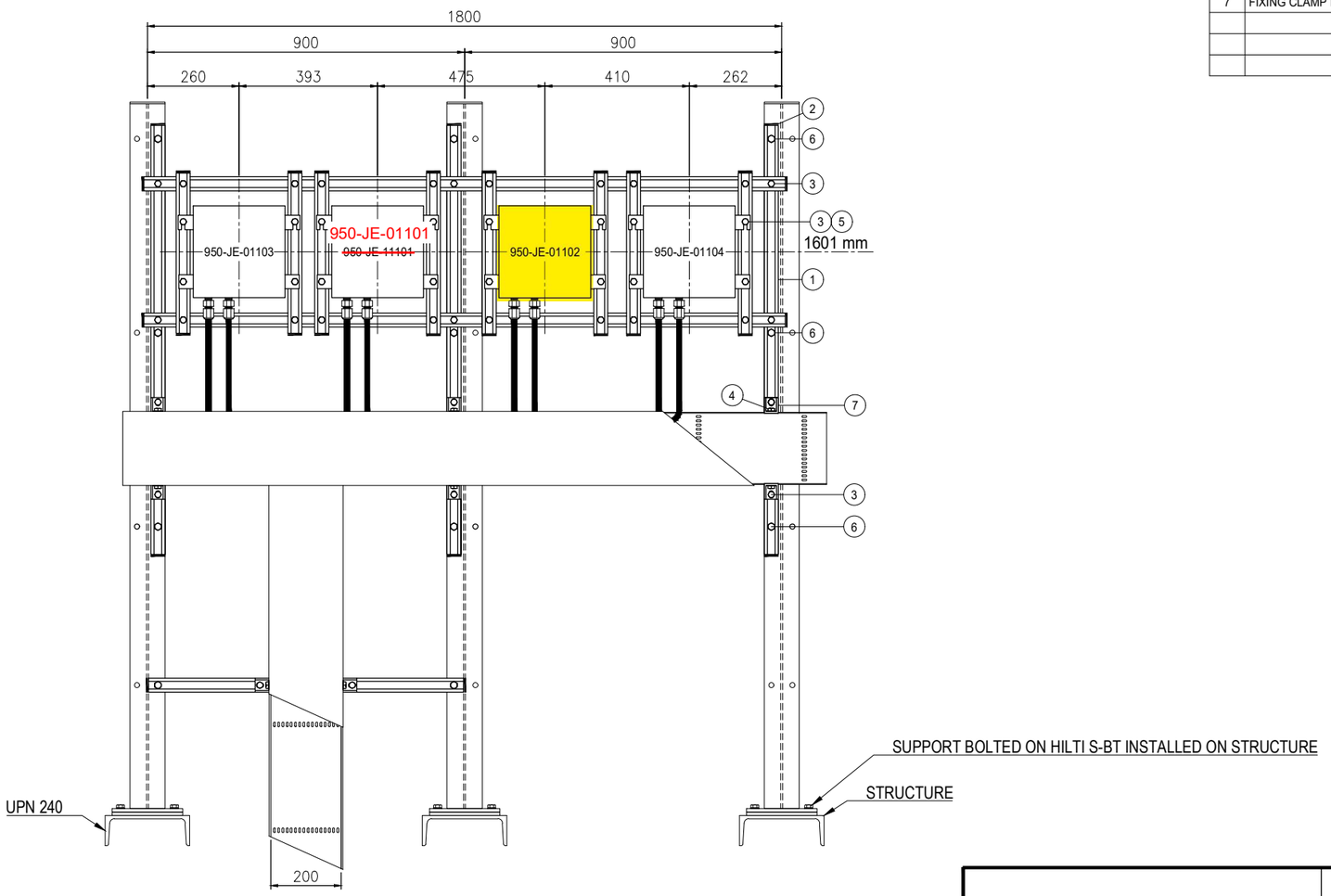
File Name : 123A90-DDL-IN-DG-40016_Rev.01

DRAWING NO. 123A90-DDL-IN-DD-40017

REV. 00

JB-01

POS.	DESCRIPTION	Q.TY
1	AISI 316L U-CHANNEL 41x41	12m
2	LDPE PLUG FOR U-CHANNEL 41x41	28
3	AISI 316L SPRING NUT M10 FOR U-CHANNEL 41X41 + BOLT M10x35 + WASHER M10	32
4	AISI 316L BOLT M10x35 + NUT M10 + WASHER M10	8
5	AISI 316L M10 SINGLE HOLE SQUARE FIXING PLATE FOR U-CHANNEL 41x41	16
6	AISI 316L BOLT M12X35 + NUT M12 + WASHER M12	11
7	FIXING CLAMP FOR CABLE TRAY/LADDER	8



NOTES

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	02/09/2024	VBA	LCA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	11/07/2024	VBA	LCA	DLO	ISSUE FOR REVIEW (IFR)

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-IN-DD-40017**

REV.:	DATE:	SIGNATURE:
1_F	02/12/24	G.Randi

ROSETTI MARINO SpA

CROSSWIND

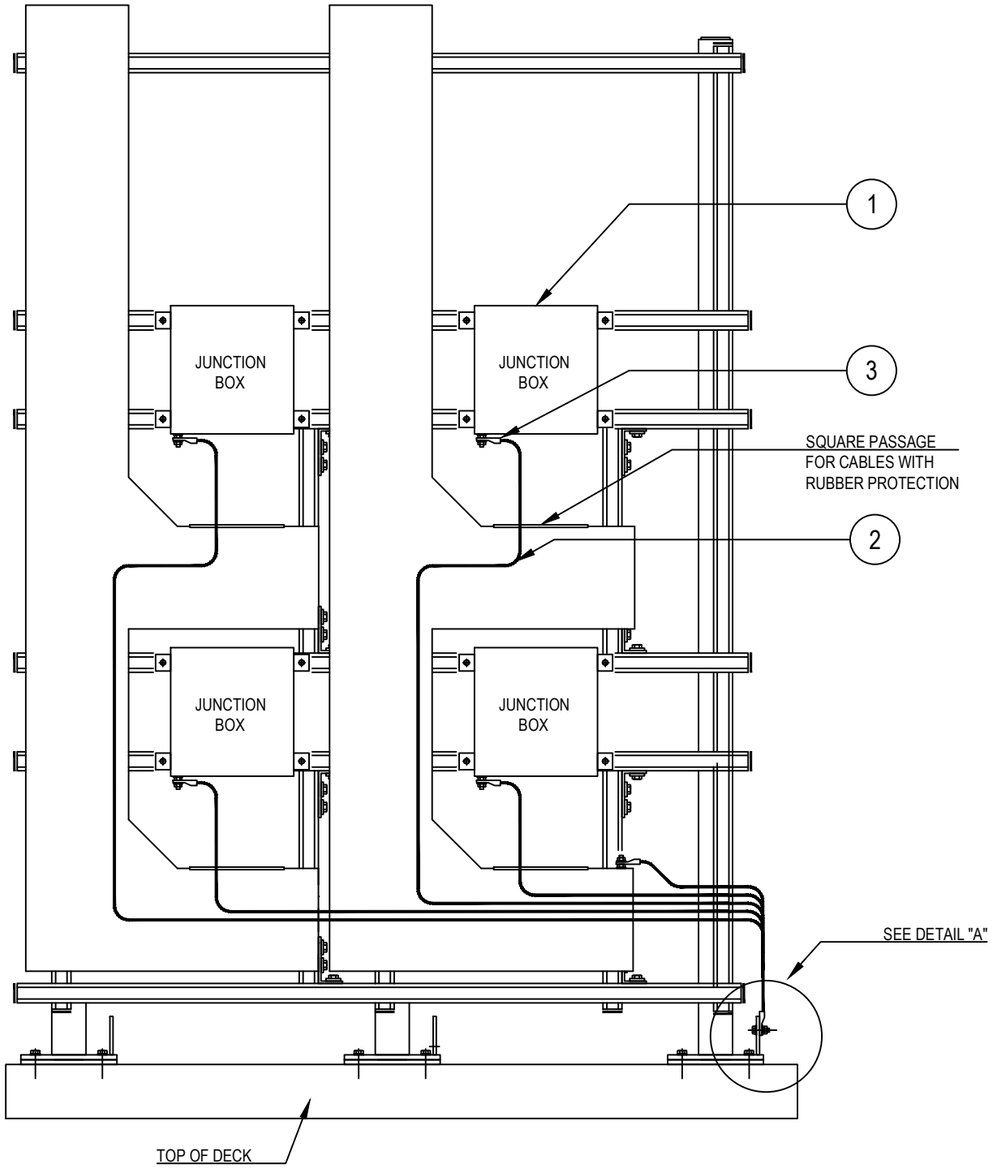
ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
INSTRUMENT INSTALLATION DETAILS
JUNCTION BOXES ON RACK

CONTRACT NO./TITLE			SCALE /
DRAWN VBA	CHECKED LCA	APPROVED DLO	DATE 11/07/2024

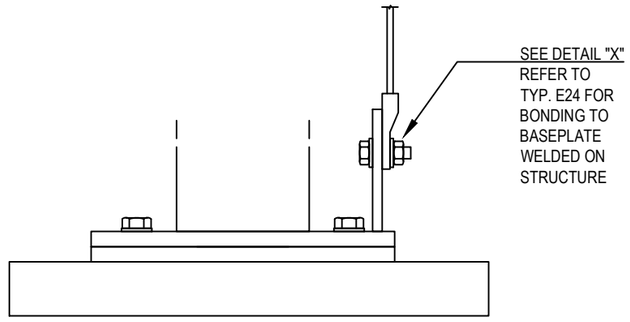
A3	DRAWING NO. 123A90-DDL-IN-DD-40017	SHEET 004	REV. 01

E15

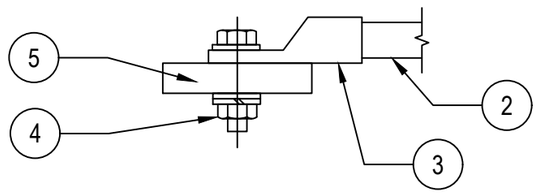


POS.	DESCRIPTION	MATERIAL	SIZE	Q.TY	NOTE
1	JUNCTION BOX (Ex)	GRP			
2	Y / G INSULATING COPPER CONDUCTOR	COPPER	$6mm^2$		
3	COMPRESSION TYPE LUG FOR INSULATION COPPER CONDUCTOR	AISI 316L	$6mm^2$		~~NOTE 1~~
4	HEXAD BOLTS, PLANE WASHERS, GROWER SPRING WASHER AND NUT	AISI 316L	M8X30		
5	EARTHING PLATE	AISI 316L			NOTE 2

DETAIL "A"



DETAIL "X"



NOTES:

~~1) CABLE LUG CRIMPING METHOD SHALL BE HEXAGONAL COMPRESSION DIES ONLY.~~

2) EARTHING PLATE WELDED ON BASE PLATE OF THE COLUM SUPPORT. SEE TYPICAL DETAIL E24

2) EXTERNAL EARTHING CONNECTION ONLY SHALL BE PROTECTED AGAINST CORROSION USING OXIDE RESISTANT COMPOUND (E.G. COPPER GREASE)

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DD-20090**

REV.:	DATE:	SIGNATURE:
2_I	07/11/24	G.Randi

ROSETTI MARINO SpA

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	26/08/24	GRA	AMA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	10/06/24	SPS	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	21/11/23	SPS	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

CROSSWIND

ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
ELECTRICAL TYPICAL INSTALLATION DETAILS–EARTHING SYSTEM
EARTHING FOR ELECTRICAL AND INSTRUMENTALE JB MOUNTED ON RACK SUPPORT

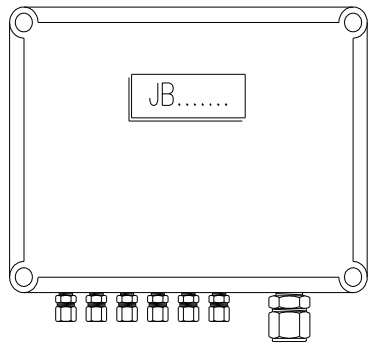
CONTRACT NO./TITLE CW–I–WP4–2023–05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

A3 | DRAWING NO. 123A90–DDL–EL–DD–20090 | SHEET 007 | REV. 02

F.to UNI A3: 420mmx297mm

File Name : 123A90-DDL-EL-DD-20090 REV.02.DWG

ELECTRICAL HOOK-UP FOR JUNCTION BOXES



Ex-d Junction Boxes							
TAGNAME	ENTRIES	POSITION (CABLE GLANDS)					PLUGS
		1	2	3	4	5	7
		M20S	M20	M25	M32	M50	M20
00-JE-11001	26	18		2			6
00-JE-11002	13	10		1			2
00-JE-11003	26	19		2			5
00-JE-11004	13	9		1			3
00-JE-11005	7	3		1			3
00-JE-12001	26	8	6	2			10
00-JE-12002	7	4		1			2
00-JE-12003	7	4	1	1			1
00-JE-12004	26	8	6	2			10
00-JE-12005	13	4	1	1			7
00-JE-12006	26	4	4	2			16
00-JE-13001	13		8		1		4
00-JE-13002	13		7		1		5
00-JE-13003	7		4	1			2
00-JE-21001	13		6		1		6
00-JE-22001	26		8	6	2		10
00-JE-22002	26		12	4	2		8
00-JE-23001	13		6		1		6
00-JE-23002	7		4	1			2
950-JE-01101	7		4		1		2
950-JE-01102	7		3		1		3
950-JE-01103	7		3	1			3
950-JE-01104	7		4	1			2
950-JE-02101	13		10			1	2
950-JE-02102	13		10			1	2
950-JE-02103	7		4		1		2
950-JE-02104	7		3	1			3
950-JE-03101	13		7			1	5
950-JE-03102	7		5		1		1
950-JE-03103	7		4	1			2
950-JE-03104	7		6	1			0
950-JE-04101	7		4		1		2
950-JE-04102	7		2	1			4
950-JE-04103	7		6	1			0
950-JE-04201	7		6		1		0
950-JE-04203	7		6	1			0
950-JE-04205	7		6		1		0

Ex-d Junction Boxes							
TAGNAME	ENTRIES	POSITION (CABLE GLANDS)					PLUGS
		1	2	3	4	5	7
		M20S	M20	M25	M32	M50	M20
950-JE-04207	13		8		1		4
950-JE-05101	13		10			1	2
950-JE-05102	7		4	1			2
950-JE-05103	7		4	1			2
950-JE-05104	7		3	1			3
950-JE-06101	7		2		1		4
950-JE-06102	7		2	1			4
950-JE-06103	7		5	1			1
950-JE-06201	7		6		1		0
950-JE-06203	7		6	1			0
950-JE-07101	7		3	1			3
TOTALS		91	219	43	18	4	166

Ex-i Junction Boxes							
TAGNAME	ENTRIES	POSITION (CABLE GLANDS)					PLUGS
			6	7			9
		M20S	M20	M25	M32	M50	M20
950-JE-04204	7		6	1			0
950-JE-04208	7		6	1			0
950-JE-06204	7		6	1			0
TOTALS		0	18	3	0	0	0

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-IN-HD-40079**

REV.:	DATE:	SIGNATURE:
2_D	13/11/24	G.Randi

ROSETTI MARINO SpA

POS.	NORM/STD CODE	DESCRIPTION	SIZE/ CONNECTION TYPE	Q.TY

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MODEL C-225 REV.1

GENERAL NOTE:
- PO: 1724001299 DD 27/06/2024
- ITEM.: 2
- Q.TY: 9
- JB MATERIAL: INOX316L
- EXTERNAL PAINTING: NOT PAINTED
- INTERNAL PAINTING: NOT PAINTED
- ALL DIMENSIONS ARE IN mm

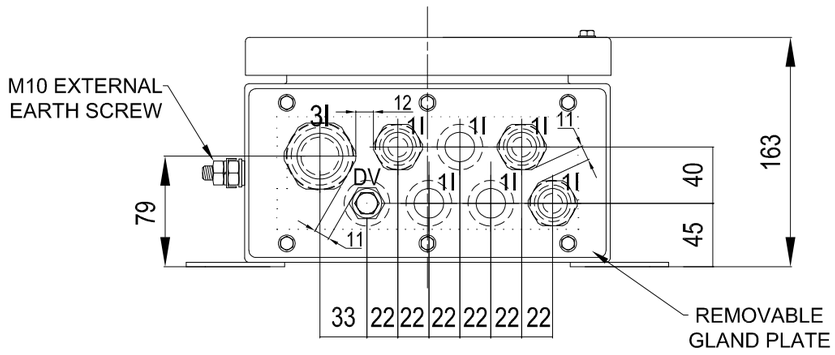
N°	Q.TY	CODE	DESCRIPTION
IF	1	B26-443	INTERNAL MOUNTING FRAME
TB-1	25	WDU2,5A	Ex eb TERMINAL BLOCK 2,5mmq BEIGE COLOUR (WEIDMULLER)
DV	1	ECDE-D1S	Ex eb IIC Gb INOX DRAIN VALVE ISO M20x1.5

TAG LIST
MATERIAL: INOX
DIMENSION: 60x20

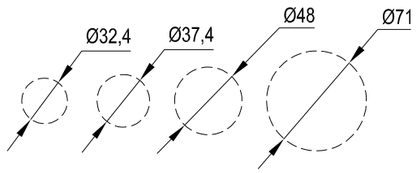
DESCRIPTION
950-JE-01101
950-JE-01102
950-JE-03102
950-JE-04101
950-JE-04201
950-JE-04205
950-JE-06101
950-JE-06201
950-JE-02103

BOTTOM SIDE

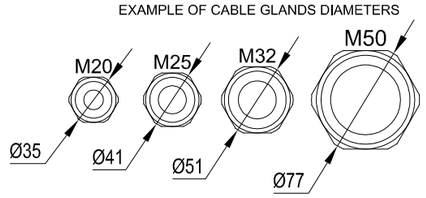
3I - n°1 Ø32.5
1I - n°6 Ø20.5



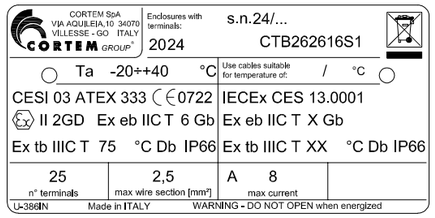
EXAMPLE OF STAR WASHERS DIAMETERS (WEIDMULLER SZS SERIES)



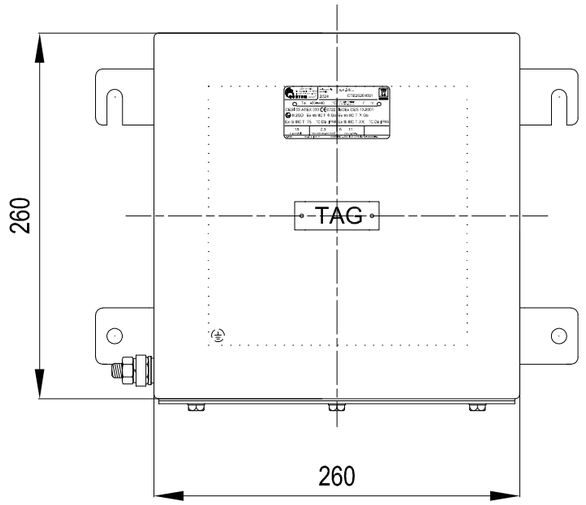
EXAMPLE OF CABLE GLANDS DIAMETERS



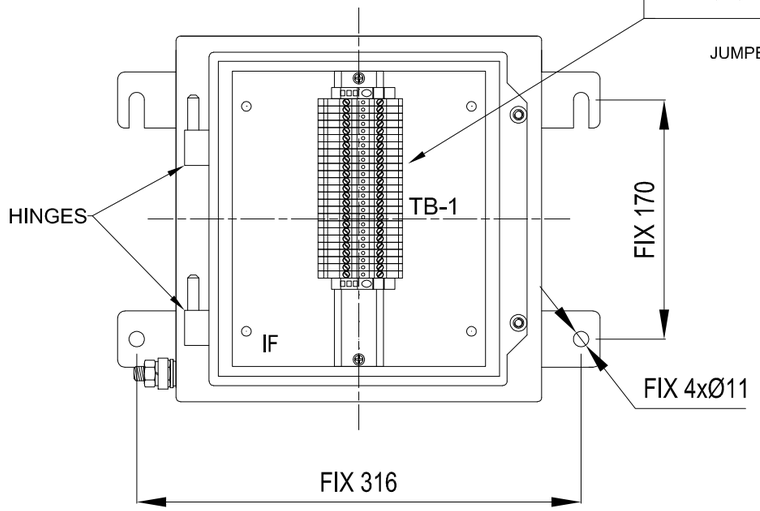
CERTIFICATE NAMEPLATE



EXTERNAL VIEW

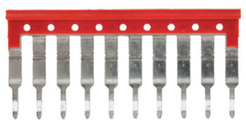


INTERNAL VIEW



TERMINAL BLOCK NUMBERING:
TB-1: 1, 2, 3, SH, 4, 5, 6, SH ..... 16, 17, 18, SH, OS

NOTE:
JUMPER BAR CONNECTED TO ALL "SH" AND "SHT" TERMINALS



NOTE CORTEM:
- COMM: COV2402708
- RIGA: 2
- Q.TY: 9
- ART. INFOR: CTB262616S1/C2402708/40.
- METTERE LA MORSETTIERA PIU' IN ALTO POSSIBILE E LA BARRA DIN PIU' LUNGA POSSIBILE

REV.4 - 18/07/2024 - FRATTARUOLO

REV.	DATE	PREP'D	CHK'D	APP'D	DESCRIPTION
5	08/08/2024	FRATTARUOLO	GIUSTI	GRATTON	ISSUED FOR CONSTRUCTION (IFC)
4	18/07/2024	FRATTARUOLO	GIUSTI	GRATTON	REISSUED FOR APPROVAL
3	17/07/2024	FRATTARUOLO	GIUSTI	GRATTON	REISSUED FOR APPROVAL
2	16/07/2024	FRATTARUOLO	GIUSTI	GRATTON	REISSUED FOR APPROVAL
1	10/07/2024	FRATTARUOLO	GIUSTI	GRATTON	REISSUED FOR APPROVAL
0	28/06/2024	FRATTARUOLO	GIUSTI	GRATTON	ISSUED FOR APPROVAL

DRAWING TITLE: ROSETTI MARINO S.P.A.

CORTEM S.p.a.
GENERAL LAYOUT
002 CTB262616S1/C2402708/40.

CORTEM JOB: COV2402708
DRAWING SCALE: /
DRAWING NUMBER: A3-C 27524
SHEET 2 / NEXT 3 / TOT. 11

CORTEM GROUP
FONDISONZO
ELFIT

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AND IT CANNOT BE REPRODUCED WITHOUT CORTEM'S AUTHORIZATION

Smart Professional R. 2012

Instrument Junction Boxes Tag list

Ex-e Execution type

M.C. 6x2x0,75mm^2

	TYPE 1A (AI/AO/DI)
1	00-JE-11005
2	00-JE-12002
3	00-JE-12003
4	00-JE-21002
5	950-JE-01103
6	950-JE-03103
7	950-JE-04102
8	SPARE
9	SPARE
10	950-JE-05102
11	950-JE-06102
12	SPARE

M.C. 6x3x2,5mm^2

	TYPE 1B (AI)
1	950-JE-01101
2	950-JE-01102
3	950-JE-03102
4	950-JE-04101
5	950-JE-04201
6	950-JE-04205
7	950-JE-06101
8	950-JE-06201
9	950-JE-02103

M.C. 12x2x0,75mm^2

	TYPE 1C (AI/AO/DI)
1	00-JE-11002
2	00-JE-11004
3	00-JE-12005
4	00-JE-21001

M.C. 2x(12x2x0,75mm^2)

	TYPE 1D (AI/AO/DI)
1	00-JE-11001
2	00-JE-11003
3	00-JE-12001
4	00-JE-12004
5	00-JE-12006
6	00-JE-22001
7	00-JE-22002

M.C. 12x3x2,5mm^2

	TYPE 1E (AI)
1	950-JE-02101
2	950-JE-02102
3	950-JE-03101
4	950-JE-05101

M.C. 12x2,5mm^2

	TYPE 2A (DO)
1	00-JE-13003
2	00-JE-23002
3	950-JE-01104
4	950-JE-02104
5	950-JE-03104
6	950-JE-04103
7	950-JE-04203
8	950-JE-05103
9	950-JE-06103
10	950-JE-06203
11	950-JE-07101

M.C. 24x2,5mm^2

	TYPE 2B (DO)
1	00-JE-13001
2	00-JE-13002
3	00-JE-23001
4	950-JE-04207

Intrinsecally Safe type

M.C. 6x2x0,75mm^2

	TYPE 3A (DI) (1 M25 + 6 M20)
1	950-JE-04204
2	950-JE-04208
3	950-JE-06204

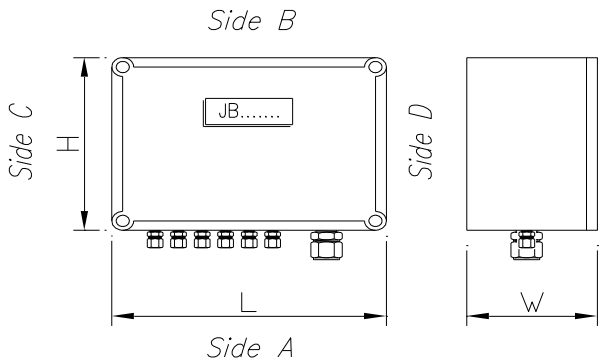
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Q.TY	ITEM	MANUFACTURER	MODEL
9	*Refer to page 5*	**CORTEM**	**CTB262616S1/C2402708/40**

CABLE ENTRIES: 1 M32 + 6 M20

TYPE - 1B

Drawing



Gland Plate dimensions: VTA

Electrical Construction	☑ Ex-e	☐ Ex-i	GR. II C	Temp. Class T6	
Certificate ATEX	N°	VTA	Standard		
Ingress Protection	☐ IP55	☑ IP66	Mounting	**HORIZONTAL**	
Threads according to Standard	☐ ISO 7/1 Rc	☐ UNI 6125	☑ METRIC	☐ None	
External Colour	☐ Grey RAL 9006	☐ Blue RAL 5015	☑ Electropolished		
Internal Colour	☐ Orange RAL 2004	☑ Standard Manufacturer			
Material – Enclosure	☐ Aluminum	☑ AISI 316L	☐ Cast Iron	☐	
Material – Internal/external Screw	☑ Stanless Steel A4	☐			
Material – Internal Bottom Plate	☑ Stanless Steel	☑			
Material – Name Plate	☑ Plastic	☐			
Options – Earthing Stud	☑ Internal	☑ External			
Options – Cover with Hinge	☐ Yes	☑ No			
Options – Drain Valve	☑ Yes	☐ No			
Internal Shields Bar	☐ Insulated	☐ Not Insulated			
Brathing Valve	☑ Yes	☐ No			

Dimensions			Thickness		
L	VTA	mm	Wall	VTA	mm
H	VTA	mm	End Plate	VTA	mm
W	VTA	mm	Cover	VTA	mm
Name Plate	Dimension (LxH)		VTA		mm
	Engraved Charapters Height		10		mm

Electrical Connection	Terminal Quantity
☑ By Strip	**25**
☐	Terminals No.
	TB-1: 1, 2, SH, 3, 4, SH, … 17, 18, SH, OS

Type	☐ Unloosening ☐ Size 2,5 mm2
Material	☑ Thermoplastic ☐ Thermosetting
Colour	☑ Std Manufac. ☐ Blue Ex-i
Mounting On	☐ "C" Bar according to std. EN-50035
	☑ "Ω" Bar according to std. EN-50022
Arrangement	☑ Single Row ☐ Double Column

Side	Hole Dimensions				Cable Glands ☐ Ex-e/d		Conduit Seals		Plugs (SS316 Ex-e)		Type of cable				
	Threaded		Unthreaded								Armoured	Unarmoured	Formation	External Diameter	Diameter Under Armour
	Q.ty	Size	Q.ty	Size	Q.ty	Size	Q.ty	Size	Q.ty	Size					
A	/	/	1	M32	/	/	/	/	/	/	☐	☐	/	/	/
	/	/	6	M20	/	/	/	/	/	/	☐	☐	/	/	/
											☐	☐			
B											☐	☐			
											☐	☐			
											☐	☐			
C											☐	☐			
											☐	☐			
											☐	☐			
D											☐	☐			
											☐	☐			
											☐	☐			

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ROSETTI MARINO — CROSSWIND

ITEM	Tag	950-JE-01102/B400-FGS-003 : AI JB TO FGS / MARSHALLING PCS				Dwg	123A90-DDL-IN-LIS-40091
	S/Sys	70-00-02	: Junction Box 950-JE-01102 and Multi-core cable (FGS System)			Module	UD/LD_B-400
TASK	code	C10002146		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity CCK	Discipline	Instrumental	Form	CJX10 — Multi/Single-Core Instrument Control Cable

CABLE DATA

Type	Cu-MICA-XLPE-IS-OS-LSZH-SWB-LSZH	Cores/Size mm²	6X3X2,5 mm2	Color	ORANGE
From	950-JE-01102		To	B400-FGS-003	

1	Check cable is as specified in project cable schedule.	OK
2	Check relevant documents are at the latest revision.	OK
3	Check cable is routed in accordance with cable layout drawings.	OK
4	Check cable for any physical damage.	OK
5	Check cable is adequately supported and correctly fixed to rack according to Project specification.	Note
6	Check bending radius is within the specified limits.	OK
7	Check cable is correctly loomed and segregated in accordance with specification.	OK
8	Check cable and core marking are in accordance with specification.	PL
9	Check cable labelling is in accordance with specification.	PL
10	Check that glands, shrouds and earthing are in accordance with specification.	PL
11	Check terminations are in accordance with termination diagram	OK
12	Check gland plate for single core cables is non-ferrous.	NA
13	If required produce Red Line Mark Up for "AS BUILT"	

INSULATION	CORE to EARTH	>999	MΩ
	CORE to CORE	>999	MΩ
	CORE to SCREEN	>999	MΩ
	CORE to ARMr	>999	MΩ
	SCREEN to EARTH	>999	MΩ
	SCREEN to ARMr	>999	MΩ
CONTINUITY	CORES	0,6	Ω
	SCREEN	0,6	Ω
	EARTH	NA	Ω
	ARMr	0,6	Ω
	TEST VOLTS	500	V

TEST ALL CORES AND RECORD LOWEST VALUE

Notes: The lowest value is recorded and must be within project specifications

TESTING INSTRUMENTS USED

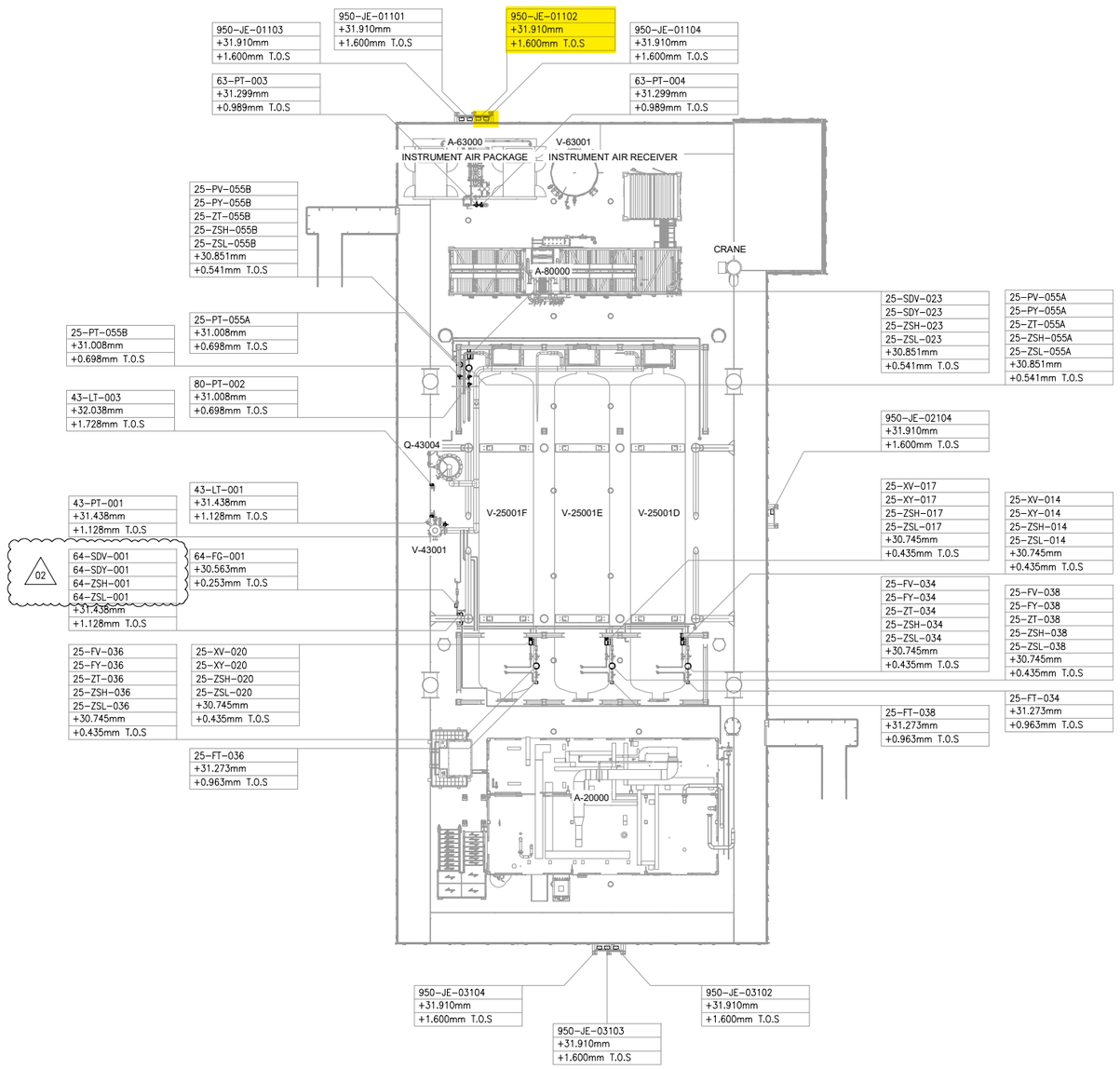
TYPE / SERIAL N°: MEGGER : KEW3125A SERIAL: W8330207 Calibration date: 10/07/2024

Comments Note 5: to PL C30000679

Page 1/1	Performed by	☑ WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	ICS IMPIANTI	RM(ROSETTI MARINO)	
Name	Francesco Zucca	Giovanni Tangianu	
Date	2024-12-02	2024-12-02	
Signature	Digitaly signed by Francesco Zucca 2024-12-02T07:11:38.215Z	Digitaly signed by Giovanni Tangianu 2024-12-02T17:40:18.716Z	

DRAWING NO. 123A90-DDL-IN-DL-40081

REV. 01

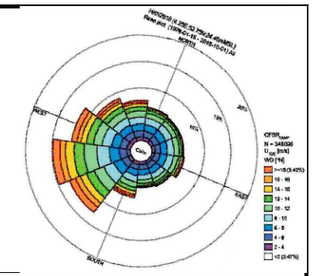


UPPER DECK

SCALE: 1:100

VIEW EL. 29310mm to 33740mm





NOTES

1. ALL DIMENSIONS AND ELEVATIONS ARE GIVEN IN mm UNLESS OTHERWISE NOTED.
2. ELEVATIONS REFER TO T.O.S.
3. THIS DRAWING IS VALID ONLY FOR INSTRUMENT LOCATION LAYOUT.

LEGEND

- INSTRUMENT JUNCTION BOX
- ELECTRONIC INSTRUMENT
- CONTROL / ON-OFF VALVE

HOLDS

REFERENCE DOCUMENTS

123A90-DDL-PP-DL-70070	PLOT PLAN - LOWER & UPPER DECK
123A90-DDL-IN-DL-40080	INSTRUMENT LAYOUT - LOWER DECK
123A90-DDL-IN-LIS-40091	INSTRUMENT CABLE LIST
123A90-DDL-IN-DG-40015	INSTRUMENT-CCS WIRING DIAGRAMS
123A90-DDL-IN-DG-40016	INSTRUMENT-SAFETY SYSTEM WIRING DIAGRAMS
123A90-DDL-IN-DL-40083	INSTRUMENT MAIN CABLES ROUTING-LOWER DECK

INSERT SUBCONTRACTOR / VENDOR LOGO HERE

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	04/10/24	VBA	LCA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	26/08/24	VBA	LCA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	22/12/23	VBA	LCA	DLO	ISSUE FOR REVIEW (IFR)

VALID FOR CONSTRUCTION

FDL DWG: **123A90-FDL-IN-DL-40081**

REV.:	DATE:	SIGNATURE:
2_A	07/10/24	G.Randi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

TITLE :
BASE LOAD POWER HUB (BLPH)
INSTRUMENT LOCATION LAYOUT–UPPER DECK
TOS EL. 30.310M

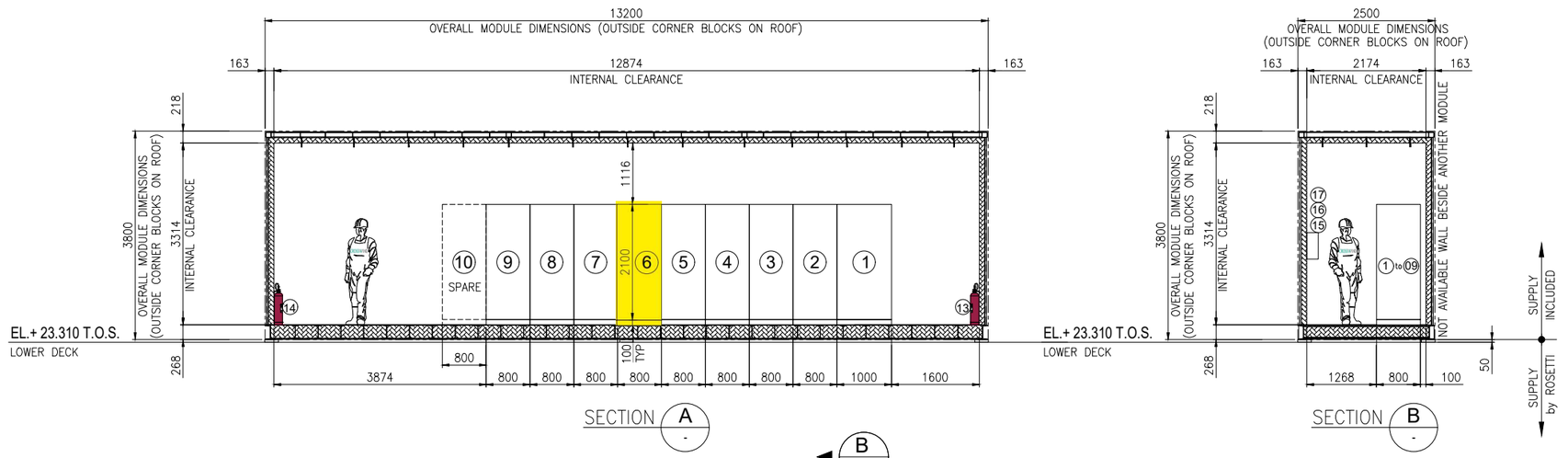
CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:150
DRAWN VBA	CHECKED LCA	APPROVED DLO	DATE 04/10/24

A1	DRAWING NO. 123A90-DDL-IN-DL-40081	SHEET 001	REV. 02

File Name : 123A90-DDL-IN-DL-40081 REV01.dwg

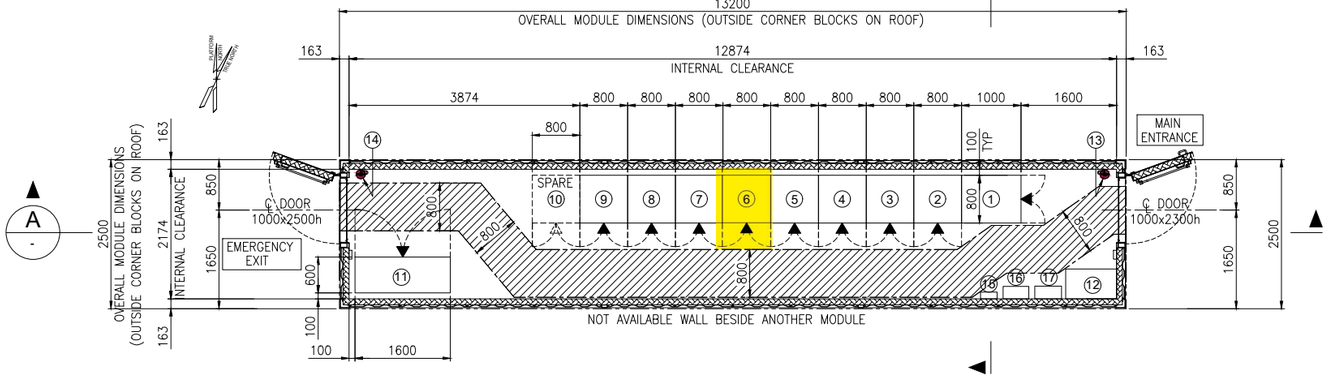
DRAWING NO. 123A90-DDL-IN-DL-40012

REV. 03



SECTION A -

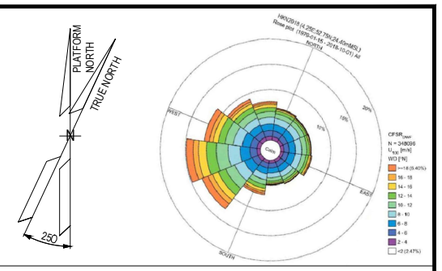
SECTION B -



EQUIPMENT LAYOUT
"B-400" I&T EQUIPMENT ROOM
BOTTOM PLAN

EQUIPMENT LIST

REF.	TAG No.	DESCRIPTION	LENGTH (mm)	WIDTH (mm)	HEIGHT (mm)	NOTE
1	B400-SRV-001	SERVER CABINET	1000	800	2100	
2	B400-NET-001	NETWORK CABINET	800	800	2100	
3	B400-EMCS-001	EMCS SYSTEM CABINET	800	800	2100	
4	B400-PCS-002	PCS MARSHALLING CABINET	800	800	2100	
5	B400-PCS-001	PCS SYSTEM CABINET 03	800	800	2100	
6	B400-FGS-003	FGS MARSHALLING CABINET 2	800	800	2100	
7	B400-FGS-002	FGS MARSHALLING CABINET 1	800	800	2100	
8	B400-FGS-001	FGS SYSTEM CABINET	800	800	2100	
9	B400-SIS-001	SIS SYSTEM/MARSHALLING CABINET	800	800	2100	
10	-	SPARE				
11	B400-HSB-001	DISTRIBUTION & HVAC PANEL - I&T ROOM	1600	600	2300	
12	-	TABLE	850	500	750	
13	-	PORTABLE EXTINGUISHER (CO2) 5 Kg.	150	150	750	
14	-	PORTABLE EXTINGUISHER (CO2) 5 Kg.	150	150	750	
15	-	FIRST AID KIT	280	115	200	
16	-	RESUSCITATION UNIT	430	210	480	
17	-	CABINET INCLUDED N.10 ESCAPE MASK	448	213	422	



NOTES

1. U.N.O. ALL DIMENSIONS ARE IN MILLIMETERS.
2. DOCUMENT VALID ONLY FOR INSTRUMENT COMPONENT, FOR OTHER SCOPE LOCATION AND INFORMATION, PLEASE REFER TO VENDORS AND PROJECT DOCUMENTS.

LEGEND

U.N.O. _____ UNLESS NOTED OTHERWISE
T.O.S. _____ TOP OF STEEL
_____ ESCAPE CORRIDOR – WIDTH 800mm.
_____ EQUIPMENT ROOM ENCLOUSURE
_____ FRONT OF EQUIPMENT

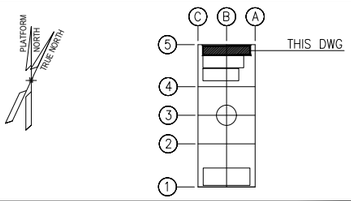
HOLDS

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REFERENCE

DOCUMENT TITLE	DOCUMENT NUMBER
Control System Architecture Detailed Drawings	123A90-DDL-IN-DD-40096
Data Network Architecture Drawings	123A90-DDL-IN-DD-40019
Earthing layouts drawings (CCR, ITER)	123A90-DDL-IN-DL-40013
Instrument and Telecom MCT Layout – Lower Deck	123A90-DDL-IN-DL-40086
"B-400" I&T Equipment Room – Architectural Layout	123A90-DDL-AR-DL-10015
"B-400" ARCHITECTURAL GENERAL LAYOUT PLAN, WIEW, SECTIONS & TYP. DETAILS	123A90-DDL-AR-DL-10015
"B-400" GENERAL ARRANGEMENT DRAWING	1724000049-AR-DA-00017
"B-400" GENERAL ARRANGEMENT DRAWING	1724000049-AR-DD-00021
"B-400" HVAC SYSTEM G.A. and DETAILS	1724000049-HV-DA-00067

KEY PLAN



REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
03	04/10/24	VBA	LCA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
02	27/05/24	MGA	LCA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	22/01/24	VBA	LCA	DLO	ISSUE FOR REVIEW (IFR)
00	07/11/23	VBA	LCA	DLO	ISSUE FOR REVIEW (IFR)

CROSSWIND

ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
OFF-SHORE ITER
EQUIPMENT LAYOUT

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:33,3
DRAWN MGA	CHECKED LCA	APPROVED DLO	DATE 27/05/24
A1	DRAWING NO. 123A90-DDL-IN-DL-40012	SHEET 001	REV. 03

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-IN-DL-40012**

REV.:	DATE:	SIGNATURE:
3_A	07/10/24	G.Randi

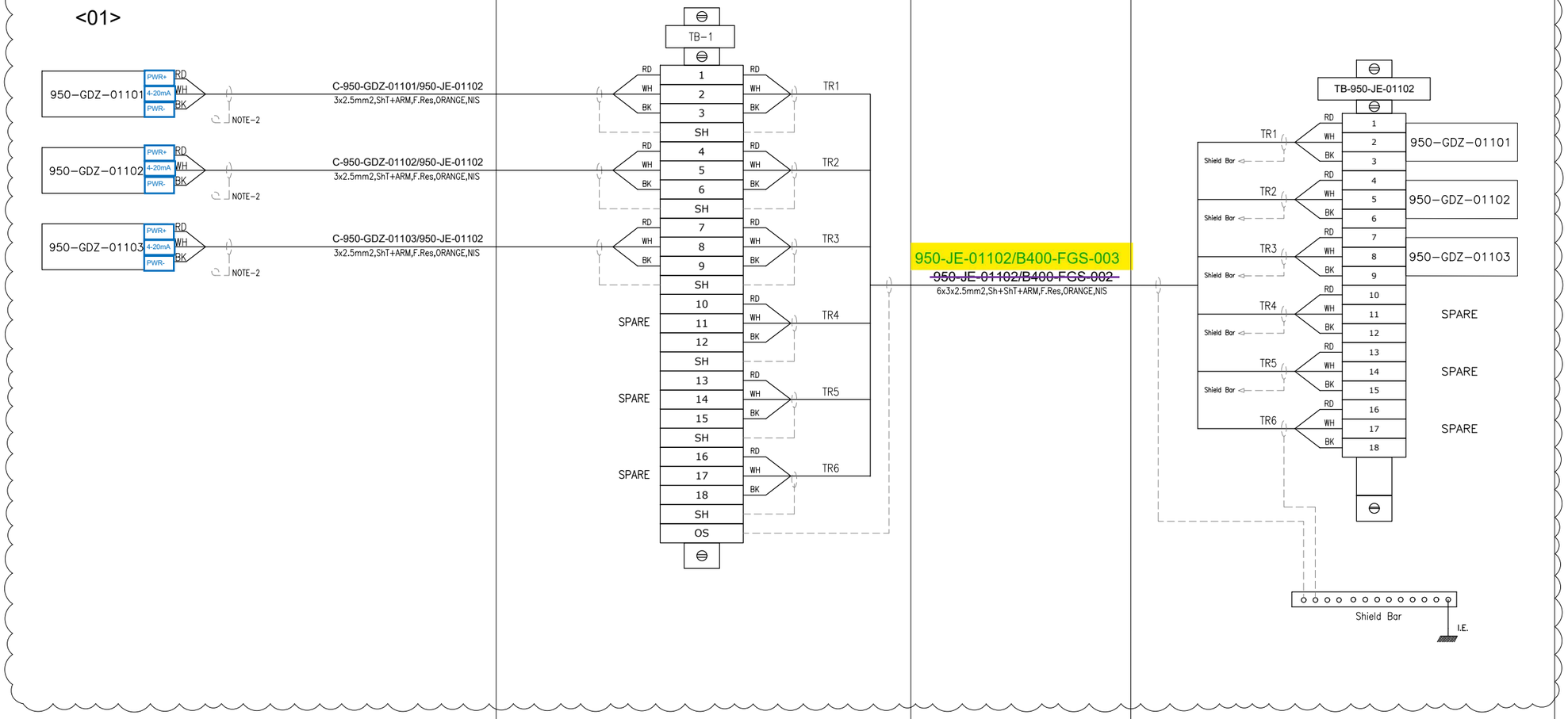
ROSETTI MARINO SpA

File Name : 123A90-DDL-IN-DL-40012 Rev.03.dwg

DRAWING NO. 123-A90-DDL-IN-DG-40016

REV. 01

FIELD		MULTICABLE	I&T EQUIPMENT ROOM (ITER)
INSTRUMENTS	JUNCTION BOX 950-JE-01102	No.	MARSHALLING CABINET ~~B400-FGS-002~~ B400-FGS-003



VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-IN-DG-40016**

REV.:	DATE:	SIGNATURE:
1_L	26/11/24	G.Randi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

TITLE :

BASE LOAD POWER HUB (BLPH)
INSTRUMENT–FGS WIRING DIAGRAMS
950–JE–01102

CONTRACT NO./TITLE			SCALE N/A
DRAWN VBA	CHECKED LCA	APPROVED DLO	DATE 23/02/2024
A3	DRAWING NO. 123A90–DDL–IN–DG–40016	SHEET 031	REV. 01

File Name : 123A90-DDL-IN-DG-40016_Rev.01

DRAWING NO. 123A90-DDL-IN-DG-40016

REV. 01

NOTES:

1. ALL SPARE ENTRIES SHALL BE PROVIDED WITH CERTIFIED EX PROOF PLUGS.
2. CABLE SCREENS / DRAIN WIRE SHALL BE SECURELY INSULATED AND TIED BACK IN THE INSTRUMENT SIDE AND SHAL BE TERMINATED IN THE MARSHALLING SIDE OF THE PANEL.
3. SPARE PAIRS / TRIADS SHALL BE CONNECTED TO TERMINALS IN JUNCTION BOX AND PANEL / MARSHALLING CABINETS.
4. ALL CABLE SCREENS TO BE TERMINATED AT THE INSTRUMENT EARTH BAR IN THE RESPECTIVE EARTH BARS (IS OR NIS) AS APPLICABLE IN THE MARSHALLING CABINET.
5. CONNECTION TERMINAL BLOCK SHALL BE DEFINED DURING CONSTRUCTION PHASE.

<01>

LEGENDS & SYMBOLS:

LEGEND:

I.E.	- GREEN ——— INSTRUMENT SIGNAL EARTH
P.E.	- GREEN/YELLOW —— P.E. EARTH/BONDING
	- TERMINAL BLOCK (TB)
WH	- WHITE
BK	- BLACK
RD	- RED
S	- SHIELD TERMINAL
OS	- OVERALL SHIELD TERMINAL
O/A Shld	- OVERALL SHIELD
I&O/A Shld	- INDIVIDUAL & OVERALL SHIELD
NIS	- NON INTRINSICALLY SAFE
IS	- INTRINSICALLY SAFE
P.E.	- PLANT EARTH
PCS	- PROCESS CONTROL SYSTEM <01>
ESD	- EMERGENCY SHUTDOWN SYSTEM
SIS	- SAFETY INSTRUMENT SYSTEM
FGS	- FIRE & GAS SYSTEM <01>
MC	- MARSHALLING CABINET
AI	- ANALOGUE INPUT
AO	- ANALOGUE OUTPUT
DI	- DIGITAL INPUT
DO	- DIGITAL OUTPUT
JE	- JUNCTION BOX FOR ELECTRICAL SIGNALS <01>

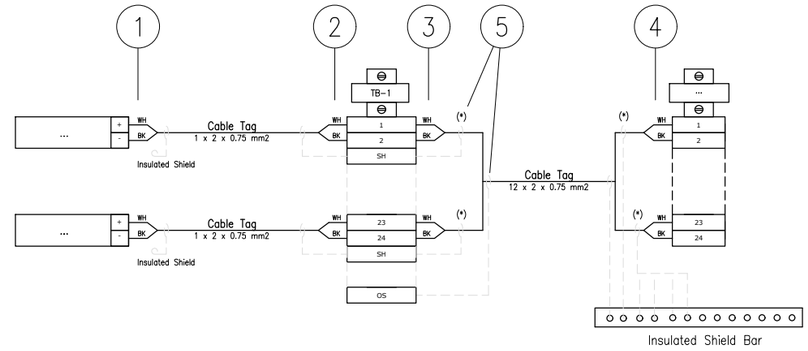
VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-IN-DG-40016**

REV.:	DATE:	SIGNATURE:
1_L	26/11/24	G.Randi

ROSETTI MARINO SpA

TYPICAL WIRE CROSS-FERRULING:

PHILOSOPHY OF CROSS-FERRULING: <01>



(*) Single shield is foreseen only for AI/AO signals.

1 - INSTRUMENT TERMINAL NO. OR POLARITY/JB NO./JB TERMINAL NO.
(SAME TAGGING PHILOSOPHY SHALL APPLIED ALSO TO THE SHIELD)

2 - INSTRUMENT TERMINAL NO. OR POLARITY/INSTRUMENT TAG NO./JB TERMINAL NO.
(SAME TAGGING PHILOSOPHY SHALL APPLIED ALSO TO THE SHIELD)

3 - PAIR OR CORE NO./MARSHALLING CABINET NO./TB NO./TERMINAL NO.
(SAME TAGGING PHILOSOPHY SHALL APPLIED ALSO TO THE SHIELD)

4 - PAIR OR CORE NO./JB NO./JB TERMINAL NO./TB NO./TERMINAL NO.
(SAME TAGGING PHILOSOPHY SHALL APPLIED ALSO TO THE SHIELD)

5 - HEAT SHRINKABLE BLACK FOR SHIELD OF NIS INSTRUMENT CABLE.
(HEAT SHRINKABLE BLUE FOR SHIELD OF NIS INSTRUMENT CABLE)

6 - IN CASE OF CONNECTION FROM RIGHT TO LEFT, ORDER OF INFORMATION SHALL BE MIRRORED

REFERENCE DRAWINGS

PIPING AND INSTRUMENT DIAGRAM	123A90-DDL-PR-PID-80009
INSTRUMENT INDEX	123A90-DDL-IN-LIS-40088 Rev.01
F&G DETECTORS LAYOUT	123A90-DDL-SAF-DL-30027

CROSSWIND

ROSETTI MARINO

TITLE :
BASE LOAD POWER HUB (BLPH)
INSTRUMENT – SAFETY SYSTEM WIRING DIAGRAMS
GENERAL NOTES/LEGENDS

CONTRACT NO./TITLE			SCALE N/A
DRAWN VBA	CHECKED LCA	APPROVED DLO	DATE 23/02/2024

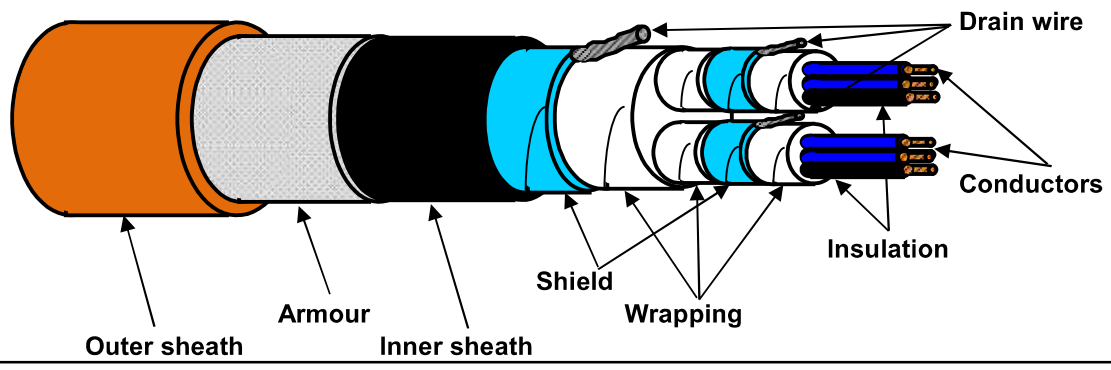
A3	DRAWING NO. 123A90-DDL-IN-DG-40016	SHEET 003	REV. 01

File Name : 123A90-DDL-IN-DG-40016_Rev.01

Tag Number	Category	Discipline	Eng Status	NativeDoc	Layout	Parent Tag	Main Function	Secondary Function	Area	From Tag	From Main Function	From Area	To Tag	To Main Function	To Area	Material ID	Material Desc.	Gland Standard	From Gland	From Entry	From Fitting	To Gland	To Entry	To Fitting	Routing	Routing Manual
950-JE-01102/B400-FGS-003	Cable	IN	VFC	123A90-DDL-IN-LIS-40091						950-JE-01102	AI JB to FGS	Upper Deck	B400-FGS-003	Marshalling FGS	Lower Deck (B-400)	SMICV15-6X3X2,5	Cable Cu Cl.2/MGT/XLPE/IS/OS/LSZH/SWB/LSZH 150/250V (300V) 6x3x2,5mm² - Orange	M40	T2_M40_Double			n.a.				U-SEC-20C / U-SEC-20A / L-SEC-2 / L-SEC-1A / B-400-SEC-1A / B-400-SEC-1B / I-MCT-401

Cu Cl.2/MGT/XLPE/IS/OS/LSZH/SWB/LSZH 150/250 V (300 V)

6X3X2,5 - INSTRUMENT CABLE - Fire Resistant - Not I.S.



TECHNICAL FEATURES

Conductors :	**7-STRANDED** plain/bare soft annealed copper wires	**IEC 60228 Class 2**
Insulation :	Mica/Glass Tape (MGT) plus XLPE, Nominal Thickness 0,6 mm	
Cores colour code :	**Red - White - Black (each core NUMBERED for TRIAD identification)**	
Triad Assembling :	7/1mt	
Triad Wrapping:	by polyester-PET Minimum Thickness 0,010 mm tape helically wound (overlap ≥ 25%)	
Drain wire :	7-Stranded **TINNED** annealed copper drain wire, **size 1,0 sqmm**, in continuous contact with the shield	
Triad Shield :	by Aluminium-**Al** Minimum Thickness 0,008 mm / polyester-**PET** Minimum Thickness 0,010 mm tape helically wound (overlap ≥ 25%)	
Shield Insulation :	by polyester-PET Minimum Thickness 0,010 mm tape helically wound (overlap ≥ 25%)	
Total Assembling :	2/1mt	
Overall Wrapping:	by polyester-PET Minimum Thickness 0,010 mm tape helically wound (overlap ≥ 25%)	
Drain wire :	7-Stranded **TINNED** annealed copper drain wire, **size 1,0 sqmm**, in continuous contact with the shield	
Overall Shield :	by Aluminium-**Al** Minimum Thickness 0,008 mm / polyester-**PET** Minimum Thickness 0,010 mm tape helically wound (overlap ≥ 25%)	
Inner sheath :	Extruded LSZH Thermoplastic Compound (O.I. ≥ 30%), type **SHF1** to IEC 60093.360, Average Thickness 1,8 mm	
Inner sheath color code:	**Black**	
Armour :	Galvanized Steel Wire Braid Armour (coverage ≥ 90%)	
Outer sheath :	Extruded LSZH Thermoplastic Compound (O.I. ≥ 30%), type **SHF1** to IEC 60093.360, moisture/abrasion/UV Resistant, Average Thickness 2,0 mm	
Outer sheath color code:	**Orange**	
Outer printing (INKJET) : (every 1000 mm)	**FLEI - 6X3X2,5 SQMM - MGT/XLPE/IS/OS/LSZH/SWB/LSZH - 150/250 V - IEC 60331.21 - IEC 60332.1.2 - IEC 60332.3.22 - Year of Manufacture - CE + Meter Marking**	
Under armour diameter :	(27,7 ± 10%) mm	
Over armour diameter :	(28,9 ± 10%) mm	
Outer diameter :	(32,9 ± 10%) mm	
Bending radius :	cable outer diameter x 10	(in fixed installation)
Voltage Test :	1,5 kV a.c. for 5' (Between Cores) / 1,5 kV a.c. for 5' (Between Cores - Shield)	
Conductors DC Resistance :	≤ 7,86 Ω/km (@ 20°C)	
Insulation Resistance :	≥ 1000 MΩ x Km (@ 20°C)	
Mutual Capacitance :	≤ 150 nF/km	
L/R ratio :	≤ 60 µH/Ω	
Inductance :	≤ 0,9 mH/km	
Applicable Standards		
Design Guidelines :	**IEC 60092.376**	
ON COMPLETE CABLE		
Fire Resistant test :	**IEC 60331.21**	
Flame Retardant test :	IEC 60332.1.2 - IEC 60332.3.22	
Acid Gas generation :	IEC 60754.1/2	
Smoke density/Light Transmittance :	IEC 61034.2 (LT ≥ 60%)	
Hazardous Areas :	IEC 60079.14 par.9.3.2a	
Temperature Range :		
ON INSULATION	(max +90°C)	(max continuous operation temperature of conductors)
	(max +250°C)	(max conductors temperature during short-circuit for 5 seconds)
ON COMPLETE CABLE		
During Operation :	(-20°C up to +90°C)	(in fixed installation)
During installation :	(- 5°C up to +50°C)	
Note :	**To meet the requirements of installation and use in Zone 1 & Zone 2 (IEC 60079-14) and "Gas & Vapour Tight" the cable must be provided with Penetrating Inner sheath together with correct ATEX approved equipment or accessories.**	

Office	Date	Sign	Rev.	Date	Sign
Drawn by :	04/04/2024	Messa			
Checked :	04/04/2024	Spaccasassi			
Approved :	04/04/2024	Cucinotta			

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Section 7 MECHANICAL COMPLETION STATUS INDEX - MECHANICAL DISCIPLINE

NOT APPLICABLE

Section 8 MECHANICAL COMPLETION STATUS INDEX - TELECOMMUNICATION DISCIPLINE

NOT APPLICABLE

Section 9 MECHANICAL COMPLETION STATUS INDEX - HVAC DISCIPLINE

NOT APPLICABLE

Section 10 MECHANICAL COMPLETION STATUS INDEX - PIPING DISCIPLINE

NOT APPLICABLE

Section 11 MECHANICAL COMPLETION INDEX - SAFETY DISCIPLINE

NOT APPLICABLE

Section 12 FAT / VENDOR REPORTS

NOT APPLICABLE

Section 13 MECHANICAL COMPLETION CHANGES / MARK-UPS

NOT APPLICABLE